



# Agency Action Review Meeting

## April 14-16, 2004

Honeywell International, Inc.

Metropolis, Illinois

Uranium Hexafluoride Release

December 22, 2003

D-12

# Plant Information

- Located near Metropolis, Illinois
- Part 40 Uranium Conversion Facility
- Authorized to possess up to 150 million pounds of natural uranium
- Plant has been in operation since 1959
- Sole domestic supplier of UF<sub>6</sub>
- Manufacture other specialty chemicals including iodine, antimony pentafluoride, sulfur hexafluoride and liquid fluorine.

# December 22, 2003 Event

- UF<sub>6</sub> released from Feeds Material Building around 2:00 a.m.
- UF<sub>6</sub> cloud went beyond site boundary
- Site Area Emergency declared
- Twenty-five members of public evacuated, and seventy-five sheltered-in-place
- Four members of public reported to hospital; one held for twenty-four hours for observation

# December 22, 2003 Event

- Based on area air samples, estimated up to seventy pounds of UF<sub>6</sub> released
- State of Illinois and Honeywell air and environmental samples indicated release below NRC regulatory limits
- Honeywell and its contractors bioassay samples indicated release below NRC regulatory limits
- NRC concluded release had minimal impact on public health and safety

# December 22, 2003 Event

- CAL issued December 22, 2003 to confirm plant shutdown, conducting investigation, identifying corrective actions and discuss with NRC before restart
- AIT dispatched to site December 22, 2003
- AIT exited with Honeywell at public meeting on January 6, 2004
- AIT report issued February 3, 2004

# December 22, 2003 Event

- AIT determined licensee staff member made errors while performing an infrequent evolution which resulted in UF<sub>6</sub> release
- Licensee did not have a procedure for this evolution
- Several contributing factors identified
- Public concerns expressed at exit in areas of off-site response and coordination with licensee and emergency responders

# History Prior To Event

- January 27, 1998 – Three workers burned from UF<sub>6</sub> leak; AIT report dated March 6, 1998
- September 9, 2003 – hydrofluoric acid spill resulted in injuries to maintenance mechanic (not NRC licensed activity)
- September 12, 2003 – Antimony pentafluoride release that traveled past south fence line but did not go beyond Honeywell property (not NRC licensed activity)
- September 30, 2003 – Small UF<sub>6</sub> release inside Feed Materials Building

# History Prior To Event

- SIT of September, 2003 events conducted October 6 – November 26, 2003
- Report and NOV issued December 17, 2003
- Two Severity Level IV violations identified for conducting an operation without a procedure and failure to follow procedures.
- Licensee corrective actions not effectively implemented prior to December 22, 2003

# Post Event Actions

- Senior management meeting with Honeywell in NRC Headquarters on February 11, 2004; open to public.
- Honeywell described results of its root cause investigation
- Honeywell described actions it planned to ensure readiness for restart and long term improvements

# Post Event Actions

- Honeywell root causes similar to NRC AIT
  - No procedure for infrequent evolution
  - Corrective action program ineffective in correcting issues identified from previous events
  - No process alarms
  - No abnormal conditions procedures
  - No procedure to document equipment problems
  - Problems implementing emergency response plan

# Post Event Actions

- Honeywell used site, sister plants, corporate and contractor resources to perform extensive assessment of all operations
- Identified corrective actions which went beyond the scope of those associated with the December 22, 2003 release
- Identified seven focus areas to support restart

# Post Event Actions

- Emergency Response
- Policies and Procedures
- Training
- Management of Change
- Mechanical Integrity
- Engineering Controls
- Corrective Actions & Auditing

# Post Event Actions

- Honeywell submitted a list of corrective actions necessary to support a safe restart on March 4, 2004
- Proposed phased restart approach (Ore Prep, Green Salt, Fluorination/Distillation)
- Corrective actions for each phase, categorized by seven focus areas

# Post Event Actions

- NRC inspection of regulatory compliance issues related to event conducted February 17-19, 2004
- Inspection report issued March 16, 2004
- Two violations identified for failure to have a procedure and to properly implement Radiological Contingency Plan
- Enforcement Panel review determined two violations were Severity Level III violations
- Licensee declined to have enforcement conference

# Post Event Actions

- NRC staff developed restart readiness oversight plan modeled after MC 350
- Purpose is to ensure Honeywell corrective actions are comprehensive, effective and sustained.
- NRC inspectors on site assessing development and confirming implementation of corrective actions.
- Public meeting conducted March 18, 2004

# Post Event Actions

- Based on assessment, the Regional Administrator, Region II and the Director of NMSS will decide if there is no objection to restart of each phase
- Local, State and EPA stakeholders will be informed of restart decision and a press release will be issued
- NRC inspectors will be present on site during first forty-eight hours after restart

# Post Event Actions

- Based on current schedule, Honeywell will restart the Ore Preparation area on March 27, 2004, Green Salt on April 1, and Fluorination/Distillation on or about April 8, 2004
- Another public meeting in Metropolis is tentatively planned for April 21, 2004